



Baltimore County

Information Technology

**Efficiencies, Upgrades and Enhancements Report
Fiscal Year 2016**

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SECTION I: OFFICE OF INFORMATION TECHNOLOGY

The Office of Information Technology (OIT) provides services and software application support to more than 20 County agencies with over 8,000 employees in these agencies, 24 hours a day, 7 days a week, 365 days a year. The Office also provides support to critical public safety applications and systems such as the 800MHz public safety radio system, the 911 Central Communications Center, the Department of Corrections system and all financial and human resource systems that support the operations of County government. This service and support is available to all County agencies and users 24 hours a day through the OIT Service Desk at x8200.

1. The **Administration (Admin)** unit, in addition to providing management and strategic guidance to all units of OIT consists of six distinct sub-units: Fiscal Administration which manages all aspects of the OIT budget and contracts, IT Project Portfolio and Operations Excellence which is responsible for all IT project funding and efficiency studies directed by OIT and County management, Access Management which manages the access of all County employees to software applications and buildings, CAD 911 which supports the entire hardware and software infrastructure of the 911 Center, Project Management which provides schedule and financial oversight to all high profile projects and Quality Assurance which provides testing of designated critical software applications.
2. The **Business Applications Unit (BAU)** manages all new software development as well as supporting over 300 software applications used by all County agencies. The Business Applications unit consists of six distinct sub-units: Human and Financial Services, Public Safety, Land Management, Libraries, Web Services, and Geographical Information Systems (GIS).
3. The **Network Services Unit (NSU)** unit manages all County desktop and server hardware, the County infrastructure, data storage and retention and telecommunications for both desktop and mobile phones allowing 8,000 County employees access to all of the applications and systems needed to perform their daily functions. The Network Services unit consists of six distinct sub-units: Servers and Systems, Service Delivery for desktop computer support and Service Desk functions, Infrastructure for wiring and connectivity, Mainframe Technical Services, Operations for monitoring all systems, and Telecommunications for phone support and installation.
4. The **Electronic Services (ES)** supports the entire 800 MHz radio system used by Police, Fire and Public Works. They install, maintain and support all electronic devices in County vehicles.
5. **Central Printing** provides printing and photocopying services to all County departments. They also provide document-scanning, offset printing, plotting and scanning of engineering drawings and maps, and CD and DVD duplication.

OIT currently supports **154** active projects including **86** Major/High Profile projects and **68** Small projects as well as responding to **38,560** yearly Service Desk requests, securely maintaining the yearly flow of **over 18 million** County emails and supporting **265** software applications.

EXECUTIVE SUMMARY

The Office of Information Technology (OIT) met with various agencies to identify and prioritize projects for fiscal year 2016 that will provide efficiency, cost savings, consolidations, satisfy mandates and enhance public safety. Projects planned for FY16 will focus on enhancing functionality of current applications and leveraging new technologies to be more effective and efficient. These projects align with OIT's strategic goals to:

- Upgrade and maintain updated applications and infrastructure to eliminate obsolete systems, modernize legacy systems, and reduce maintenance and trainings costs.
- Simplify the infrastructure with the expectation to not only save on cost and resources, but to render the IT infrastructure stable, resilient, scalable, and maintainable.
- Leverage consolidation opportunities that focus on integrating hardware, software, operating systems and human resources with the purpose of improving operational efficiency, optimizing service delivery, and lowering costs.
- Standardize IT in order to minimize IT costs within an organization by both keeping hardware and software as consistent as possible and reducing the number of tools available that address the same basic need.
- Provide services and information to citizens by expanding online services, and increasing access from mobile and hand-held devices.
- Promote more mobile workforce opportunities in order to increase working productively by utilizing devices such as mobile phones, laptops, GPS technologies and tablets.
- Implement technologies that align with people by conducting business process analysis. This ensures greater project success whether the project involves integrating standalone IT systems, enterprise systems or to simply improving efficiency and delivering greater productivity within an agency.
- Promoting a resilient and redundant infrastructure to protect the County's critical infrastructure is crucial to the safety, security and economic well-being of all county constituents.

Based on current priorities, resources and funding, these are the planned projects for FY16.

SECTION II: PROJECT OVERVIEW

The **FY16 - Operational Excellence** initiatives will baseline some of the County's current operations and/or programs, recommending business practices that will improve efficiency and provide sustainable, cost efficient delivery of services. These projects will optimize operational efficiencies, highlight how reallocation of resources will ensure current demand can be met, identify cost savings, and improve customer experience.

The **OpEx – Health and Human Services Initiatives** will analyze the internal business processes; staffing analysis and program operational review; development of performance indicators and metrics systems; and organizational change management. This will provide an integrated department with cross-functional capabilities to meet the changing demands of the customer through a streamlined service delivery model; improved performance and accountability.

Sharepoint Initiatives will address the growing need to provide an automated document management and archiving solution for OIT, improve collaboration and ensure information is easily accessible. This will promote environmental responsibility and cost savings, improve accessibility and transparency of information.

The **Public Safety Communications System Upgrade Master Plan** will provide a planning document with upgrade recommendations, budgetary costs and a high-level implementation schedules. The project will identify developing and available technologies that maintain and ensure public safety during times of crisis.

Content Management Planning will identify the best strategy and solutions for OIT websites content management to provide intuitive and transparent information to County employees and constituents. This will reduce the number of inquiries requiring human intervention for information.

The **Research Wireless Fingerprinting and Face Recognition devices** project will identify the latest technology for wireless fingerprint devices and face recognition devices to better identify people without direct contact or from a video.

Mainframe Migration Planning Create a roadmap to move off of the mainframe by researching and reviewing agency usage of mainframe systems then determining whether to archive or migrate data and systems. Benefits: Reduce cost. Update technology to standard platforms.

The **PSAP Upgrade Unify Release** project implements necessary upgrades of Primary and Back-up sites and ensures OIT maintains contract compliance. This ensures the latest functionality and provides support for SIP circuits.

The **PSAP - Expand Private Branch Exchange (PBX) for Corrections** project will eliminate the PBX at the detention center and move the service to the PBX used for the PSAPs. This will include converting the digital circuit to SIP from PRI and maximize the digital circuits required to support all three sites. This is needed as Verizon is removing support for PRI circuits.

The **Migrate Human Resources Information System data to Advantage Human Resources** project will move HRIS Police HR data from an out-dated system to the new 3.10 Advantage HR system. By consolidating employee information onto a single enterprise wide solution, the redundancy of data entry into multiple systems will be eliminated and staff time saved. As Advantage HR is becoming the system of record, it allows for eliminating existing interfacing systems thereby streamlining IT support and maintenance and gaining efficiencies through the consolidation of systems.

The **Accela - Cass Works Replacement** project initiates the phased replacement of the CassWorks inventory, asset and work order systems serving DPW bureaus of Utilities, Engineering, and Solid Waste. It will integrate the County's systems that support the management and maintenance of the County's public works infrastructure. This will improve the submission of service requests, ensure inventory levels never run low, work crews have mobility devices that provide them accurate information for emergency repairs, ensure preventative maintenance is proactively managed and provide engineers with predictive modeling for repairs.

The **Supervisory Control and Data Acquisition (SCADA) System Upgrade** will replace aging copper wire lines with fiber and broadband connection, and upgrade the SCADA system hardware and software. The upgraded system and lines connecting the County's 116 pumping stations to central operations will reduce the risk of failures and overflows.

The **Parking Enforcement** project will update the current manual ticketing process to a new system that benefits everyone in the ticket process. It will provide field officers the ability to generate parking citations faster and produce accurate and photographic evidence that should minimize court cases. Citizens will be able to pay their fine online, even if they have lost their tickets. The new system should provide a streamline process that enable faster issuance of tickets and ease in processing payments.

The **Advantage Upgrade/ Replacement Adobe to BIRT** project allows Baltimore County to utilize the Business Intelligence and Reporting Tools (BIRT) which provides reporting and business intelligence capabilities for web applications. This is necessary to stay in full support with CGI, the Advantage vendor.

This project implements the second year of the **Microsoft Enterprise Agreement** three year project to standardize IT across the County. Implement a Microsoft Enterprise Agreement for selected Microsoft software. The County will see immediate operating cost savings.

The **Broadband Fiber Expansion Phase II** project will focus on providing the same benefits realized in the first phase to remaining high schools, additional middle and elementary schools, as well as Police, Fire, Health and other emergency response facilities. This phase will provide considerable cost reduction in leased circuits and provides the ability for low cost fiber leasing for business development. Also, provides improved communication during emergency situations.

The **School Security - Card Readers and CCTVs** project will enhance school security throughout the Baltimore County's Public School System by replacing card readers at front doors and add additional card readers to other entrances in elementary schools. This will also include replacing older security cameras in all middle and high schools.

The **BCPL - New E-Commerce/RFID Solution** project continues to implement infrastructure changes to accommodate new e-commerce hardware and to comply with Payment Card Industry (PCI) 2.0 guidelines. This will enable the Libraries to be PCI compliant and replace RFID hardware that is coming to end of life.

The **Digital Marketing Displays** will replace the current marketing practice which uses printed posters. The Libraries would like to modernize their marketability by moving to a digital platform. The newer digital format will also provide more flexibility for the marketing team and a fresher look to branches to attract and retain patrons.

SECTION III: SELECTED PROJECTS

FY16 - Operational Excellence

Description:

These projects will base-line service delivery of specific county operations or programs, recommend business practices to improve efficiency and effectiveness of operations, and implement changes to current practice that provide sustainable, cost efficient delivery of services. These analyses will utilize a People, Process, Policy, Technology framework that will include business process analysis, staffing and workflow analysis, and evaluation of the utilization and fit of current/future interaction with IT processes and systems resulting in both technical and adaptive recommendations with clear measures to monitor improvements to both operations and customer service.

Benefit:

This will improve processes, utilize best practices and industry standards, identify cost savings, and provide the County improvement strategies to respond to service delivery and technology demands.

Potential Examples:

- Improve operational access, communication and processes in workforce development for employers, workers and staff.
- Streamline operations and improve safety and security for courthouse staff and visitors.
- Increase safety and utilization of county recreation facilities for citizens.
- Improve 911 operational processes and cross-functional capabilities to sustain high level of responsiveness 24/7.
- Improve responsiveness of management of liability claims for citizens.
- Transition public works staff from manual to more technical, integrated operations to provide continuous, sustainable operations.

Expected Implementation:

On-going efforts

Project Category:

Innovation, Efficiency, Vacancy Reduction, Consolidation, Cost Savings

Operational Excellence – Health & Human Services Initiatives

Description:

These projects focus on both internal and external business processes of key operations within Health & Human Services (HHS) to baseline current operations against best practices and develop concrete action plans tied to HHS goals and objectives. Reviews will include business process workflow analysis, staffing assessment, program operational review, development of performance indicators and metrics systems, and organizational change management. The implementation of these plans will improve efficiency and effectiveness of service delivery, reduce costs and improve customer access.

Benefit:

An integrated department with cross-functional capabilities providing services through a holistic, streamlined service delivery model; consolidated/centralized operations; co-locating and leveraging of federal, state, county resources and service delivery.

Potential Examples:

- Customers can access HHS services more efficiently.
- Employees can direct customers more effectively to specific service that meets their needs.
- Employees can track and monitor program results.
- Employees have clear measures of performance and accountability.
- Internal business processes better aligned to support outcome of programs.
- Decisions driven by results (data) of program outcomes.

Expected Implementation:

On-going efforts

Project Category:

Innovation, Efficiency, Vacancy Reduction, Consolidation, Cost Savings

Sharepoint Initiatives

Description:

With the growing need to manage documents electronically, these SharePoint initiatives will automate the management and archiving of electronic documents, provide a searchable knowledge base, and expand the employee's ability to collaborate on and share files with each other, other jurisdictions and the public.

Benefit:

These initiatives will facilitate cost savings as less paper is used, provide the ability to review documents from any location and device, promotes environmental responsibility (Less paper equals killing less trees), provides for anytime document storage and retrieval.

Potential Examples:

- County staff can communicate and easily share case files and other information with state agencies.
- Managers can monitor statuses and generate reports on-demand from records stored within SharePoint.
- Project managers can track the status and location of contracts, requests, and other paper documents being circulated for signature.
- Supervisors and managers will receive alerts and notifications when employees submit documents for review and approval.
- Inspectors can search and retrieve all records stored in SharePoint related to a specific person, event, or property (within the constraints of security and privacy policies).
- Project and process teams can store documents and share information, statuses, assignment and discussions among team members.
- Content managers can seamlessly publish agency related information and documents internally and externally.

Expected Implementation:

On-going efforts

Project Category:

Innovation, Efficiency, Cost Savings

Public Safety Communications System Upgrade Master Plan

Description:

This project will develop a public safety communications system upgrade master planning document that will provide a roadmap for the radio system. This planning document will provide upgrade recommendations, budgetary costs and a high-level implementation schedule.

Benefit:

Have a clear vision and roadmap to maintain and ensure wireless public safety communications are keeping pace with developing and available technologies. Enhancing the existing technology of wireless communications between 911 consoles and voice and data units deployed in the field.

Potential Examples:

- Report will investigate and report impacts of **Next Generation 9-1-1** on existing infrastructure.
- Provide recommendations for taking advantage of new technology (Subscriber GPS tracking, Text Messaging, improved over the air programming of equipment).
- Explore risks and advantages of data and voice connections to and from neighboring radio systems including the new State of Maryland 700 MHz system.
- Administration will be able to use the report as a point of reference for planning and budgeting.
- Provide timelines for implementation of desired technologies.

Expected Implementation:

Estimated First Quarter 2016 (Third Quarter FY16)

Project Category:

Public Safety

Content Management Planning

Description:

Identify, evaluate and recommend policies, procedures and technology needed to manage and integrate text, data, and multimedia content dynamically across Baltimore County applications, web sites, and social media. The evaluation will focus on the back-end management, rather than home page design, of the County's internal and external web portals with an emphasis on integration with existing management systems, accessibility, and what-you-see-is-what-you-get editing capabilities.

Benefit:

Provide information to County employees and constituents. Reduce County resources fielding phone inquiries for information.

Potential Examples:

- Department heads can monitor delivery of services through web-based dashboards.
- Citizens can submit and track multiple service requests from a single interface.
- Content authors can write and update content with familiar tools, requiring minimal training.
- Content editors can review, approve, update, and share content, where appropriate, across multiple web pages and web sites.
- Web site managers can monitor and enforce Baltimore County's brand and governing standards from a single point.
- Web designers can push color, font, logo, and other brand and design decisions across multiple web sites simultaneously.

Expected Implementation:

Estimated First Quarter 2016 (Third Quarter FY16)

Project Category:

Innovation, Efficiency, Cost Savings

Research Wireless Fingerprinting and Face Recognition Devices

Description:

Research wireless fingerprint devices and face recognition devices. The Wireless Fingerprinting device will allow officers to better identify people that do not have proper identification. The Facial Recognition can be used to identify a person without direct contact or from a video.

Benefit:

Increase officer and public safety related to criminals and terrorist.

Potential Examples:

Wireless Fingerprinting:

- Reduce the time it takes to identify a person.
- Eliminate the need to bring suspects back to the station for identification.
- Cross check fingerprints against FBI and Homeland Security watch lists.

Facial Recognition:

- Eliminate the need to bring suspects back to the station for identification.
- End the possibility of criminals being missed who are using a fake ID.
- Increase arrests and the ability to identify and stop terrorists and other wanted individuals.
- Overcome the difficulties and time involved in achieving accurate identification with fingerprints.

Expected Implementation:

Estimated Second Quarter 2016 (Fourth Quarter FY16)

Project Category:

Public Safety

Mainframe Migration Planning

Description:

Evaluate the functions of 20 legacy applications still using older, mainframe technologies to determine their current value and, where appropriate, plan to move those functions to more current, less expensive, better supported solutions. The evaluation will ID the functions and their users, the business processes they support, their current value to the business, key business rules, and process flows. The final analysis may propose a series of short, mid, and long-term initiatives to retire unnecessary functions, implement practical work-arounds where viable, and migrate complex, high-value functions to other technologies in the County's portfolio.

Benefit:

Reduce cost. Update technology to standard platforms.

Potential Examples:

- IT portfolio managers can develop capital project and budget proposals needed to retire the older mainframe technology.
- Budget managers can re-allocate operational cost of the mainframe to other County needs.
- System analysts and programmers will develop solutions based on sound requirements and ROI.
- End-users can quality deliver services, using more familiar and intuitive web-based tools, requiring less technical training.

Expected Implementation:

Estimated Second Quarter 2016 (Fourth Quarter FY16)

Project Category:

Innovation, Efficiency, Cost Savings

PSAP Upgrade Unify Release

Description:

Upgrade Primary and Back-up site to latest releases of products.

Benefit:

Maintain contract compliance. Add latest functionality and adds support for SIP circuits.

Potential Examples:

- Assures continued support from Vendor while providing Next Generation 9-1-1 (NG911) infrastructure.
- Puts all Vendor supplied solutions on same release level.
- Conversion to SIP circuits will reduce County's telephony annual costs.

Expected Implementation:

Estimated Third Quarter 2015 (First Quarter FY16)

Project Category:

Public Safety, Upgrade/Enhancements

PSAP - Expand Private Branch Exchange for Corrections

Description:

Eliminate the Private Branch Exchange (PBX) at the detention center and move the service to the PBX used for the PSAPs. Convert the digital circuit to SIP from PRI.

Benefit:

Maximize the digital circuits required to support all three sites. Verizon is removing support for PRI circuits. Reduces the annual maintenance by eliminating the hardware for a full PBX at the Detention Center. Provides central administrative functions for both sites. Leverages the existing phones and infrastructure and provides the ability to combine Verizon services provided to both.

Potential Examples:

- User at both sites will not be impacted allowing a contiguous work flow.
- Shared resources providing redundancy for services.

Expected Implementation:

Estimated First Quarter 2017 (Third Quarter FY16)

Project Category:

Innovation, Efficiency, Consolidation, Cost Savings

Migrate the Human Resources Information System data to Advantage Human Resources System

Description:

Migrate HRIS Police HR data to the new 3.10 Advantage HR system. HRIS is a vendor product built on the FoxPro 2.6 platform that has been modified for the Baltimore County Police Department to track Police personnel information. FoxPro is an outdated technology that has outlived its business use. Moreover, the HRIS application resides on an old server that must be replaced soon. Advantage HR version 3.10 is Baltimore County's enterprise personnel data system of record. By moving Police personnel into one system, gains efficiencies for the Police and HR departments who will be able to use one system to manage personnel records. There are approximately 45 different users of the HRIS system requesting specific roster data that rely mostly on the personnel data fed into other police systems.

Benefit:

Consolidating employee information onto our existing enterprise wide solution, Advantage HR, will reduce staff time of duplicative data entry. Removing the additional system of record will provide a single source of employee data, eliminating conflicting information and diminishing the chance for data entry error. Consolidation enforces Advantage HR as Baltimore County's system of record. Along with reduction of redundant data entry into different systems, we will also be able to eliminate existing interfaces of intervening systems. Currently, data originates in Advantage HR then via batch is sent to OLTA, which then sends a flat file to HRIS and other police systems including, Intranet Roster Searches, DWI Tracking, Overtime Summary, InPursuit (manual process), BEAST, Awards Tracking, Grievance Tracking, and Uniform Ordering. IT support and maintenance will gain efficiencies through consolidation of systems.

Potential Examples:

- Employee records will have one master source of data for all police personnel, Advantage HR.
- Advantage HR will feed personnel data to down-stream systems directly, removing the interface and batch files sent to OLTA and HRIS.
- Personnel data is up-to-date in the system of record immediately upon entry.

Expected Implementation:

Estimated Second Quarter 2016 (Fourth Quarter FY16)

Project Category:

Innovation, Efficiency, Consolidation, Cost Savings, Upgrade/Enhancements

Accela - Cass Works Replacement

Description:

This project initiates the phased replacement of the CassWorks inventory, asset and work order systems serving Department of Public Works (DPW) bureaus of Utilities, Engineering, and Solid Waste. It will integrate the County's Accela Platform, Geographical Information System (GIS) and ancillary systems to support management and maintenance of the County's public work's infrastructure. The system will improve the County's ability to route service requests, initiate and manage work orders and gather information pertaining to our sewer and water assets.

Benefit:

Consolidate on a single asset management platform, simplifying training for DPW staff and maintenance of the system. This will provide a more modern, web-based functionality. Improved data collection and quality better positions the County for more robust asset management methodologies; improving capital expenditure planning and customer service. Employment of mobility devices increases crew productivity through work order automation and improved access to information in the field.

Potential Examples:

- Constituents can submit service requests and obtain feedback online.
- Work crews will receive geo-spatial information through mobility devices to locate underground assets; decreasing the time to address emergency repairs.
- Supervisors will receive automatic notification when assets are due for preventative maintenance.
- Engineers will use predictive modeling to plan capital expenditures for sewer pipe repairs and replacement (future phase).
- Supply room employees will be automatically notified to re-order when inventory levels are low.

Expected Implementation:

Estimated Third Quarter 2018 (First Quarter FY18)

Project Category:

Innovation, Efficiency, Consolidation, Cost Savings

Supervisory Control And Data Acquisition (SCADA) System Upgrade

Description:

This project will upgrade hardware and software SCADA system that is used to monitor waste flow in the County's 116 pumping stations. It will replace the aging copper-wire telephone lines connecting the pump stations and central operations with fiber and broadband connections.

Benefit:

The upgrade will reduce the risk of failure and overflows at the County's 116 pump stations and allow better data capture and compliance reporting. It will lay the foundation for future remote control of some pumping station operations and maintenance.

Potential Examples:

- Utility technicians will have greater confidence in the real-time data feeds, reducing the need for manual inspections, particularly during bad-weather events.
- County engineers will be able to use collected data for compliance reporting and predictive modeling for maintenance and capital construction planning.
- In future phases, DPW personnel will turn on backup pumps and perform other key operations and maintenance functions remotely without the need to go to the field.
- Operators can see real-time system trouble and quickly mitigate the situation protecting the constituents against sewer contamination of the underground water sources and wetlands.
- Data modeling would help anticipating overflow risk situations and proactively mitigate them.
- Wear and tear on equipment can be reduced by continuously monitoring levels, reducing operating costs and having a greater Return on Investment (ROI).

Expected Implementation:

Estimated Fourth Quarter 2016 (Second Quarter FY17)

Project Category:

Innovation, Efficiency, Consolidation, Upgrade/Enhancements

Parking Enforcement

Description:

Selection and implementation of new parking enforcement system will provide the county with a new system that issues and processes parking tickets from issuance to payment thereby improving ticket management. It will produce a better ticket to the violator, reduce data entry efforts, reduce errors, and improve tracking of payments. Overall, this system should improve revenue collections. The current, mostly manual ticketing process, can take weeks and months for issued tickets to be processed.

Benefit:

The new parking enforcement system provides benefits to everyone involved in the ticketing process – from the officers issuing the ticket, those issued the ticket, to those managing the process. It will reduce time field officers require to generate a parking citation by providing an electronic entry that includes address database, the ability to attach photos to the violation, and print tickets from the captured information. Efficiencies are gained by reducing back office time to track and monitor collections. These processes also result in improved revenue collection and a much more complete data collection of violations for use in court cases.

Potential Examples:

- Parking enforcement officers will have an address database to speed up ticket entry on violation data entry.
- Parking enforcement officers will be able to attach pictures and other enforcement notes when issuing the ticket.
- Citizens issued parking violations will be able to find and pay for their violation on line, even if the printed ticket is lost.
- Outstanding payments owed by citizens, including Parking Violations, will be viewable and payable through the MUNIS and the Payment Portal interface.
- Timely issuance of tickets and payments will be enabled by a streamlined system.
- Ticket revenue will be gathered earlier and more completely.
- A percentage of court cases will be averted by providing more relevant and complete data and evidence.
- Better and more complete data will be available to the county for outstanding parking violation cases which go to court.

Expected Implementation:

Estimated Third Quarter 2016 (First Quarter FY17)

Project Category:

Innovation, Efficiency

Advantage Upgrade/ Replacement Adobe to BIRT

Description:

Converting forms in Advantage from Adobe to BIRT format. We currently use Adobe to produce several documents and forms in Advantage, including W2s, paychecks, pay advice, disbursement checks, master agreements (MAs), Purchase Orders (POs), invoices, and request for services (RQS). Moving to BIRT keeps Baltimore County in full support with our Advantage vendor, CGI as they replace Adobe with BIRT. BIRT is the open source Business Intelligence and Reporting Tools project that provides reporting and business intelligence capabilities for web applications.

Benefit:

The vendor will no longer support Adobe after June 2015; however, CGI will continue to support clients on Advantage 3.10 through June 30, 2016 using Adobe. Moving to BIRT will provide Baltimore County a visual report designer within the Eclipse IDE for creating BIRT Reports. BIRT also provides a runtime component for generating reports that can be deployed to any Java environment, which we could leverage in other county web applications. BIRT also includes a charting engine fully integrated into the report designer and can be used standalone to integrate charts into an application.

Potential Examples:

- Baltimore County can implement federal forms designed by other agencies, such as W2s with less work needed on design.
- Additional forms and system reports can be included within applications.

Expected Implementation:

Estimated Second Quarter 2016 (Fourth Quarter FY16)

Project Category:

Innovation, Efficiency, Upgrade/Enhancement

Microsoft Enterprise Agreement

Description:

Second year of initial 3-year Microsoft Enterprise Agreement, for selected Microsoft software, which will help the County to standardize IT across the enterprise.

Benefit:

Immediate operating cost savings by replacing costly legacy systems and applications.

Potential Examples:

- Simplifies license management.
- Software assurance benefits to include new version upgrades.

Expected Implementation:

Estimated Second Quarter 2016 (Fourth Quarter FY16)

Project Category:

Efficiency, Upgrades/Enhancements

Broadband Fiber Expansion Phase II

Description:

Continuing to build on the success of the Inter County Broadband Network (ICBN) Fiber project funded by the federal Broadband Technologies Opportunities Program grant, wherein we constructed over 160 miles of fiber optic backbone throughout Baltimore County, Phase II of our fiber expansion continues to expand the reach of our fiber facilities. The Broadband Expansion Phase I project proved to be a good investment and allowed the County to provide greatly improved broadband services to additional schools, Libraries, and various other government facilities, while eliminating charges paid to 3rd party Internet Service Providers. The Broadband Expansion Phase II project will focus on providing these services to all remaining High Schools, additional Middle and Elementary Schools, as well as Police, Fire, Health and other emergency response facilities.

Benefit:

Connectivity to additional community anchor institutions (schools, libraries, community centers, senior centers). This is a considerable cost reduction in leased circuits across general government, public schools and libraries. This provides the ability for communication throughout the State using interconnecting fiber with our neighboring counties. Low cost fiber leasing for business development within or between county's and across the state.

Potential Examples:

- Large operational cost savings.
- Improved communications during emergency situations.
- Secured communications within County agencies on a network owned by Baltimore County.

Expected Implementation:

Estimated Third Quarter 2016 (First Quarter FY17)

Project Category:

Efficiency, Upgrades/Enhancements

School Security – Card Readers and CCTVs

Description:

Replacement of card readers at front doors and add additional card readers to other entrances in elementary schools. This will include replacing older security cameras in all middle and high schools.

Benefit:

The purpose of this program is to enhance school safety and security throughout the BCPS system.

Potential Examples:

- Elementary Schools: Add an average of five (5) additional cameras inside each building to view and record all entries at exterior doors.
- Middle Schools: Replace existing video surveillance systems that are more than three years old. Work will include expanding the number of cameras to be consistent with current BCPS surveillance standards.
- High Schools: Replace existing video surveillance systems that are more than three years old. Work will include expanding the number of cameras to be consistent with current BCPS surveillance standards.
- Replace existing and add card access swipes throughout all elementary, middle and high school buildings. Swipes will be located at all key access points, including staff access doors, physical education access doors, and doors utilized by Baltimore County Recreation and Parks.
- New card swipes will be fully compatible with the One-Card System from Scholar Chip.

Expected Implementation:

Estimated Third Quarter 2016 (First Quarter FY17), Phased Implementation

Project Category:

Innovation, Efficiency, Vacancy Reduction, Consolidation, Public Service, Upgrade/Enhancements

BCPL - New E-Commerce/Radio Frequency Identification (RFID) Solution Phase II

Description:

Continue to replace end-of-life Radio Frequency Identification (RFID) equipment (RFID pads and self-checkout stations) and to make infrastructure changes to accommodate new e-commerce hardware to comply with current Payment Card Industry (PCI) guidelines.

Benefit:

Update e-commerce to be PCI compliant (to the latest data security standards for major credit card brands including Visa and MasterCard). Hardware will be chip and pin compatible. Replace RFID hardware that is used for security and circulation that is coming to end-of-life and failing more frequently.

Potential Examples:

- Library customers will be able to check out their own materials and pay for charges at new self-checkout stations.
- Credit card transactions at both self-checkout and staff assisted stations will be performed and secured under the latest PCI standards.
- RFID hardware and software will be updated to increase reliability and efficiency for both staff and customers.

Expected Implementation:

Estimated Third Quarter 2016 (First Quarter FY17)

Project Category:

Innovation, Efficiency, Upgrade/Enhancements

BCPL - Digital Marketing Displays

Description:

The Baltimore County Libraries promote activities and initiatives at every branch. The current marketing is produced in a print format. The Libraries would like to modernize their marketability by moving to digital platform. The marketing team will produce content at a central location and publish to remote hosts at each branch. The system must have the capability to display common marketing themes at every branch, while allowing for more site specific information to also be displayed independently.

Benefit:

Centralize control of marketing will reduce or eliminate poster printing. The newer digital format will also provide more flexibility for the marketing team and a fresher look to branches to attract and retain patrons.

Potential Examples:

- Less recurring cost due to reduction in print.
- Ability to update marketing on a more frequent basis to keep up with initiatives
- First step to bringing outdated libraries to a newer digital look and feel to attract younger patrons.

Expected Implementation:

Estimated Second Quarter 2016 (Fourth Quarter FY16)

Project Category:

Innovation, Efficiency, Cost Savings